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09/487,151	01/19/2000	Franz Amtmann	PHO 99,503	2834

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EXAMINER	
HA, DAC V	
ART UNIT	**PAPER NUMBER**
2611	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/487,151	AMTMANN ET AL.	
	Examiner	Art Unit	
	Dac V. Ha	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,5,7-10,13,14 and 16-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21* is/are allowed.

6)☒ Claim(s) *1, 5, 7-10, 13, 14, 17-20, 22-25, 27-33* is/are rejected.

7)☒ Claim(s) *4,16 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 4, 5, 7-10, 13, 14, 16-33 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 4 is objected to because of the following informalities: Claim 4, line 2, "the decoding stage instruction" should be changed to "the decoding instruction" to avoid antecedent problem. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1, 5, 7-9, 14, 17-20, 27, 29-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koo et al. (US 5,345,231) (hereafter Koo) in view of Poon et al. (US 5,940,438) (hereafter Poon) and Bashan et al. (US 6,045,043) (hereafter Bashan).

Re claim 1, Koo discloses:

"receiving means for receiving a modulated carrier signal which contains an encoded data signal" (Abstract, lines 4-6; col. 2, lines 30-38; Fig. 2, element 3; Fig. 3; col. 4, lines 54-55; Note; the pulse width modulated signal is itself including "encoded data signal");

"a power supply capable of generating an operating voltage from the modulated carrier signal" (Fig. 2, elements 11, 12, 12'; col. 6, lines 3-9);

"demodulation means for demodulating the received modulated carrier signal and for outputting the encoded signal contained therein; decoding means for decoding the encoded data signal and for outputting a data signal" (Fig. 2, elements, 15, col. 6, lines 14-30, wherein element 15 teaches both "demodulation" and "decoding");

"data processing means for processing the data output by the decoding means and powered by the power supply" (Fig. 2, element 16; col. 6, lines 14-30; col. 6, lines 3-9).

Koo differs from the claimed invention in that Koo does not teach "said encoded data signal including decoding instruction information" and "the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal encoded in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal encoded in conformity with a second decoding method, wherein said first decoding method is Manchester (MA) and the second decoding method is Miller; and wherein said decoding means further includes a decision stage capable of determining based on said decoding instruction information which of the first and second decoding stages is suitable to decode the encoded data signal."

The attention is now directed to Poon. Firstly, in the above context, encoding and modulating can be viewed as one entity and demodulating and decoding can be viewed as one entity. With that, Poon discloses the claimed subject matter "said

encoded data signal including decoding instruction information" (col. 3, lines 1-5) and "the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal encoded in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal encoded in conformity with a second decoding method" and "wherein said decoding means further includes a decision stage capable of determining based on said decoding instruction information which of the first and second decoding stages is suitable to decode the encoded data signal" as follows.

Poon discloses a modem that can accommodate a plurality of modulation formats (Abstract). Particularly, soft-ware reconfigurable demodulator can be reconfigured to use appropriate modulation format based on the instruction information in the received signal (Fig. 5A; elements 74, 78, 80, 84; col. 2, line 62 to col. 3, line 5; col. 7, lines 7-16. That is, the demodulator with reconfigurable capability in Poon advantageously teaches both the "first decoding stage" and "second decoding stage".

Therefore, it would have been obvious to one skilled in the art at the time of the invention, to at least try, to incorporate such concept of soft-ware reconfigurable demodulating from Poon into Koo's demodulator to provide flexibility to the system 3 of Koo so that Koo's transponder could have been able to accommodate different type of modulation/coding formats.

The combination of Koo and Poon differs from the claimed invention in that it does not teach "wherein said first decoding method is Manchester (MA) and the second

decoding method is Miller". Bashan, in the same field of endeavor, teaches utilization of Manchester (MA) and Miller coding are well-known in the art (col. 14, lines 6-11). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute or include both Manchester and Miller coding, taught in Bashan, into the plural modulation formats in the aforementioned combination and still can expect a predictable result.

Re claim 5, Poon further discloses "wherein the decoding means includes a storages stage in which the encoded data signal can be stored prior to being read out by the data processing means" in Fig. 6, elements 96, 98; col. 8, lines 14-17.

Re claim 7, Poon further discloses "an encoding means for outputting an encoded data signal, said encoding means including at least a first encoding stage and a second encoding stage" in Fig. 5B; element 79; col. 7, line 57 to col. 8, line 9.

Re claim 8, Poon further implies the teaching of the claimed subject matter "wherein said first encoding stage is designed to encode data in conformity with a third method and said second encoding stage is designed to encode data in conforminty with a fourth method which is different from said third method" in Fig. 5B; element 79; col. 7, line 57 to col. 8, line 9, in that, element 79 could be adaptively "encoding" the signal according to a plurality of different methods.

Re claim 9, Poon further discloses "modulation means designed to modulate the encoded data signal output" in Fig. 5B; element 79.

Re claim 27, Koo further discloses "wherein the power supply is capable of generating the operating voltage by rectifying the modulated carrier signal" in Fig. 2, element 11.

Re claim 14, see corresponding apparatus claim 1.

Re claim 17, Poon further discloses the claimed subject matter "wherein the decision stage evaluates decision supporting information to determine which of the first and second decoding stages is suitable to decode the encoded data signal" in Fig. 5A, elements 74, 78; col. 2, line 62 to col. 3, line 5; col. 7, lines 7-16.

Re claim 18, Poon further discloses "wherein the decoding step further includes a storages stage in which the encoded data signal may be stored prior to decoding by the first and second decoding stages" in Fig. 6, elements 96, 98; col. 8, lines 14-17.

Re claim 19, Poon further implies the teaching of the claimed subject matter "a first encoding stage which encodes data in conformity with a third method; and a second encoding stage which encodes data in conformity with a fourth method" in Fig. 5B; element 79; col. 7, line 57 to col. 8, line 9, in that, element 79 could be adaptively "encoding" the signal according to a plurality of different methods.

Re claim 20, Poon further suggests the teaching of "where in the third decoding method is frequency shift keying (FSK) and the fourth decoding method is phase shift keying (PSK)" in col. 1, lines 20-27; col. 5, lines 27-51; col. 8, lines 47-49, wherein any modulation/coding scheme could be used.

Re claim 29, Koo further discloses "wherein the power supply rectifies the modulated carrier signal to generate the operating voltage" in Fig. 2, element 11.

Re claim 30, see corresponding apparatus claim 1 above since claim 1 recites all claimed subject matter of claim 30 (Note: Manchester coding is a No-Return-To-Zero coding).

Re claim 31, Koo further discloses "wherein the power supply rectifies the modulated carrier signal to generate the operating voltage" in Fig. 2, element 11.

Re claim 32, see corresponding apparatus claim 1 above since claim 1 recites all claimed subject matter of claim.

Re claim 33, Koo further discloses "wherein the power supply rectifies the modulated carrier signal to generate the operating voltage" in Fig. 2, element 11.

Claim Rejections - 35 USC § 103

5. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Koo et al. (US 5,345,231) (hereafter Koo) in view of Poon.

Re claim 22, Koo discloses:

"receiving means for receiving a modulated carrier signal which contains an encoded data signal" (Abstract, lines 4-6; col. 2, lines 30-38; Fig. 2, element 3; Fig. 3; col. 4, lines 54-55; Note; the pulse width modulated signal is itself including "encoded data signal");

"a power supply capable of generating an operating voltage from the modulated carrier signal" (Fig. 2, elements 11, 12, 12'; col. 6, lines 3-9);

“demodulation means for demodulating the received modulated carrier signal and for outputting the encoded signal contained therein; decoding means for decoding the encoded data signal and for outputting a data signal” (Fig. 2, elements, 15, col. 6, lines 14-30, wherein element 15 teaches both "demodulation" and “decoding");

“data processing means for processing the data output by the decoding means” (Fig. 2, element 16; col. 6, lines 14-30; col. 6, lines 3-9).

Koo differs from the claimed invention in that Koo does not teach “the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while in parallel the second decoding stage is arranged to decode said data signal in conformity with a second decoding method, and a decision stage which is arranged which of the first and second decoding stages is suitable to decode said data signal.”

The attention is now directed to Poon. Firstly, in the above context, encoding and modulating can be viewed as one entity and demodulating and decoding can be viewed as one entity. With that, Poon discloses the claimed subject matter “the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while in parallel the second decoding stage is arranged to decode said data signal in conformity with a second decoding method, and a decision stage which is arranged which of the first and second decoding stages is suitable to decode said data signal” is known as follows.

Poon discloses a modem that can accommodate a plurality of modulation formats (Abstract). Particularly, the demodulators are arranged in parallel capable of accommodating different modulation formats (Fig. 2, elements 30, 32, 34, 36; col. 1, lines 46-64); and the "decision stage" is based on which channel is used.

Therefore, it would have been obvious to one skilled in the art at the time of the invention, to at least try, to incorporate such concept of parallel demodulating from Poon into Koo's demodulator to provide flexibility to the system 3 of Koo so that Koo's transponder could have been able to accommodate different type of modulation/coding formats.

6. **Claims 23, 10, 13, 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koo et al. (US 5,345,231) (hereafter Koo) in view of Dent et al. (US 5,230,003) (hereafter Dent) and Bashan et al. (US 6,045,043) (hereafter Bashan).

Re claim 23, Koo discloses:

"receiving means for receiving a modulated carrier signal which contains an encoded data signal" (Abstract, lines 4-6; col. 2, lines 30-38; Fig. 2, element 3; Fig. 3; col. 4, lines 54-55; Note; the pulse width modulated signal is itself including "encoded data signal");

"a power supply capable of generating an operating voltage from the modulated carrier signal" (Fig. 2, elements 11, 12, 12'; col. 6, lines 3-9);

"demodulation means for demodulating the received modulated carrier signal and for outputting the encoded signal contained therein; decoding means for decoding the

encoded data signal and for outputting a data signal" (Fig. 2, elements, 15, col. 6, lines 14-30, wherein element 15 teaches both "demodulation" and "decoding");

"data processing means for processing the data output by the decoding means" (Fig. 2, element 16; col. 6, lines 14-30; col. 6, lines 3-9).

Koo differs from the claimed invention in that Koo does not teach "the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while simultaneously the second decoding stage is arranged to decode said data signal in conformity with a second decoding method, wherein said first decoding method is Manchester (MA) and said second decoding method is Millter; and a decision stage which is arranged which of the first and second decoding stages is suitable to decode said data signal."

The attention is now directed to Dent. Firstly, in the above context, encoding and modulating can be viewed as one entity and demodulating and decoding can be viewed as one entity. With that, Dent discloses the claimed subject matter "the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while simultaneously the second decoding stage is arranged to decode said data signal in conformity with a second decoding method", and "a decision stage which is arranged to decide which of the first and second decoding stages is suitable to decode said data signal" in Abstract; Fig. 3, all elements; col. 5, line 46 to col. 6, line 19.

Therefore, it would have been obvious to one skilled in the art at the time of the invention, to at least try, to incorporate such concept of simultaneously decoding from Dent into Koo's demodulating/decoding process to provide flexibility to the system 3 of Koo so that Koo's transponder could have been able to accommodate different type of modulation/coding schemes.

The combination of Koo and Dent differs from the claimed invention in that it does not teach "wherein said first decoding method is Manchester (MA) and the second decoding method is Miller". Bashan, in the same field of endeavor, teaches utilization of Manchester (MA) and Miller coding are well-known in the art (col. 14, lines 6-11). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute or include both Manchester and Miller coding, taught in Bashan, into the plural modulation formats in the aforementioned combination and still can expect a predictable result.

Re claim 10, see claim 23 above since claim 23 recites all claimed subject matter of claim 10 (Note: Manchester coding is a No-Return-To-Zero coding).

Re claim 13, Dent further discloses the claimed subject matter "wherein the data is ouput to the data processor before a decision stage determines which of the first and second decoding stages is suitable for decoding the encoded data signal" in Fig. 3, elements "decoded bits"; col. 5, line 46 to col. 6, line 19.

Re claim 28, Koo further discloses "wherein the power supply is capable of generating the operating voltage by rectifying the modulated carrier signal" in Fig. 2, element 11.

7. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Koo in view of Dent.

Re claim 24, Koo discloses:

“receiving device capable ofreceiving a modulated carrier signal which contains an encoded data signal" (Abstract, lines 4-6; col. 2, lines 30-38; Fig. 2, element 3; Fig. 3; col. 4, lines 54-55; Note; the pulse width modulated signal is itself including “encoded data signal”);

“a power supply capable of generating an operating voltage from the modulated carrier signal” (Fig. 2, elements 11, 12, 12’; col. 6, lines 3-9);

“demodulation device configured to demodulate the received modulated carrier signal and for outputting the encoded signal contained therein; decoding device capable of decoding the encoded data signal and for outputting a data signal” (Fig. 2, elements, 15, col. 6, lines 14-30, wherein element 15 teaches both "demodulation" and “decoding").

Koo differs from the claimed invention in that Koo does not teach “said decoding device including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal in conformity with a second decoding method”, “a decision stage which determines which of the first and second decoding stages is suitable to decode the encoded data signal" and “data processing device configured to process the data output

by the decoding device, wherein once the decision stage applies decision information to the data processing device regarding which of the first and second decoding stages is suitable to decode the encoded data signal, the determined first or second decoding stage is used for processing the remainder of the encoded data signal".

The attention is now directed to Dent. Firstly, in the above context, encoding and modulating can be viewed as one entity and demodulating and decoding can be viewed as one entity. With that, Dent discloses the claimed subject matter ""said decoding device including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal in conformity with a second decoding method", "a decision stage which determines which of the first and second decoding stages is suitable to decode the encoded data signal" and "data processing device configured to process the data output by the decoding device, wherein once the decision stage applies decision information to the data processing device regarding which of the first and second decoding stages is suitable to decode the encoded data signal, the determined first or second decoding stage is used for processing the remainder of the encoded data signal" in Abstract; Fig. 3, elements 40, 42, 34; col. 5, line 46 to col. 6, line 19, wherein the "processing device" can be viewed as the combination of all elements in Fig. 3.

Therefore, it would have been obvious to one skilled in the art at the time of the invention, to at least try, to incorporate such concept of simultaneously decoding from Dent into Koo's demodulating/decoding process to provide flexibility to the system 3 of

Koo so that Koo's transponder could have been able to accommodate different type of modulation/coding schemes.

8. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Koo in view of Dent as applied to claim 24 above, and further in view of Bashan.

The combination of Koo and Dent discloses almost all claimed subject matter in claim 25, as stated above. The combination of Koo and Kent differs from the claimed invention in that it does not teach "wherein said first decoding method is Manchester (MA) and the second decoding method is Miller". Bashan, in the same field of endeavor, teaches utilization of Manchester (MA) and Miller coding are well-known in the art (col. 14, lines 6-11). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute or include both Manchester and Miller coding, taught in Bashan, into the plural modulation formats in the aforementioned combination and still can expect a predictable result.

Allowable Subject Matter

9. Claim 21 is allowed.

10. Claims 4, 16, 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Connell et al. (US 5,940,447)

Womack et al. (US 5,982,819)

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 4/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dac V. Ha/
Primary Examiner, Art Unit 2611